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DOCKET NO: M0656/70098US00

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Landers et al.
Serial No: Not Yet Assigned
Confirmation No:
Filed: Herewith
For: METHODS AND PRODUCTS RELATED TO
GENOTYPING AND DNA ANALYSIS

Examiner: Not Yet Assigned
Art Unit: Not Yet Assigned

MAIL STOP PATENT APPLICATION

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

STATEMENT FILED PURSUANT TO THE DUTY OF
DISCLOSURE UNDER 37 CFR §§1.56, 1.97 AND 1.98

Sir:

Pursuant to the duty of disclosure under 37 C.F.R. §§1.56, 1.97 and 1.98, the Applicant requests consideration of this Information Disclosure Statement.

PART I: Compliance with 37 C.F.R. §1.97

This Information Disclosure Statement is filed with a U.S. Patent Application. No fee or certification is required.

PART II: Information Cited

The Applicant hereby makes of record in the above-identified application the information listed on the attached form PTO-1449 (modified). The order of presentation of the references should not be construed as an indication of the importance of the references.

PART III: Explanation of Non-English Language References and Remarks Concerning Other Information Cited

The following is a concise explanation of the relevance of each non-English language reference listed on the attached form PTO-1449 (modified):

The following are remarks concerning the other information cited:

PART IV: Remarks

Documents cited anywhere in the Information Disclosure Statement are enclosed unless otherwise indicated. It is respectfully requested that:

1. The Examiner consider completely the cited information, along with any other information, in reaching a determination concerning the patentability of the present claims;
2. The enclosed form PTO-1449 be signed by the Examiner to evidence that the cited information has been fully considered by the Patent and Trademark Office during the examination of this application;
3. The citations for the information be printed on any patent which issues from this application.

By submitting this Information Disclosure Statement, the Applicant makes no representation that a search has been performed, of the extent of any search performed, or that more relevant information does not exist.

By submitting this Information Disclosure Statement, the Applicant makes no representation that the information cited in the Statement is, or is considered to be, material to patentability as defined in 37 C.F.R. §1.56(b).

By submitting this Information Disclosure Statement, the Applicant makes no representation that the information cited in the Statement is, or is considered to be, in fact, prior art as defined by 35 U.S.C. §102.

Notwithstanding any statements by the Applicant, the Examiner is urged to form his own conclusion regarding the relevance of the cited information.

An early and favorable action is hereby requested.

Respectfully submitted,
Landers et al., *Applicant*

By: _____



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FORM PTO-1449/A and B (Modified) INFORMATION DISCLOSURE STATEMENT BY APPLICANT				APPLICATION NO.: Not Yet Assigned		ATTY. DOCKET NO.: M0656/70098US00	
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				APPLICANT: Landers et al.			
				GROUP ART UNIT: Not Yet Assigned		EXAMINER: Not Yet Assigned	
Sheet	1	of	5				

U.S. PATENT DOCUMENTS

Examiner's Initials	Cite No.	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication or of issue of Cited Document MM-DD-YYYY
		Number	Kind Code		
	*A1	5,946,431		Fernandes, J.	8/31/99
	*A2	5,945,675		Malins, D.	8/31/99
	*A3	5,945,283		Kwok, P-Y., et al.	8/31/99
	*A4	5,942,392		Amouyel, P., et al.	8/24/ 99
	*A5	5,919,626		Shi, J., et al.	7/6/99
	*A6	5,908,978		Amerson, H., et al.	6/1/99
	*A7	5,888,778		Shuber	3/30/99
	*A8	5,885,775		Haff, et al.	3/23/99
	*A9	5,869,237		Ward, D., et al.	2/9/99
	*A10	5,866,337		Schon	2/2/99
	*A11	5,861,245		McClelland, et al.	1/19/99
	*A12	5,858,659		Sapolsky, et al.	1/12/99
	*A13	5,856,104		Chee, et al.	1/5/99
	*A14	5,834,189		Stevens, J., et al.	11/10/98
	*A15	5,817,007		Fodgaard, H., et al.	10/6/98
	*A16	5,814,444		Rabinovitch, P.	9/29/98
	*A17	5,811,239		Frayne	9/22/98
	*A18	5,795,722		Lacroix, J-M., et al.	8/18/98
	*A19	5,789,168		Leushner, J. et al.	8/4/98
	*A20	5,787,032		Heller, et al.	7/28/98
	*A21	5,762,876		Lincoln, et al.	6/9/98
	*A22	5,760,130		Johnston, et al.	6/2/98
	*A23	5,759,821		Teasdale	6/2/98
	*A24	5,744,305		Fodor, et al.	4/28/98
	*A25	5,741,678		Ronai, Z.	4/21/98
	*A26	5,738,993		Fugono, et al.	4/14/98
	*A27	5,731,171		Bohlander	3/24/98
	*A28	5,728,524		Sibson	3/17/98
	*A29	5,721,098		Pinkel, D., et al.	2/24/98
	*A30	5,710,000		Sapolsky, et al.	1/20/98
	*A31	5,702,890		Housman, D.	12/30/97
	*A32	5,695,933		Schalling, M., et al.	12/9/97
	*A33	5,683,872		Rudert, W., et al.	11/4/97
	*A34	5,679,524		Nikiforov, T., et al.	10/21/97
	*A35	5,667,976		Van Ness, J., et al.	9/16/97
	*A36	5,667,972		Drmanac, R., et al.	9/16/97
	*A37	5,663,062		Sorge, J., et al.	9/2/97

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Examiner's Initials	Cite No.	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication or of issue of Cited Document MM-DD-YYYY
		Number	Kind Code		
	*A38	5,639,611		Wallace, et al.	6/17/97
	*A39	5,633,134		Shuber, T.	5/27/97
	*A40	5,632,957		Heller, M., et al.	5/27/97
	*A41	5,610,287		Nikiforov, T., et al.	3/11/97
	*A42	5,605,662		Heller, M., et al.	2/25/97
	*A43	5,604,099		Erlich, et al.	2/18/97
	*A44	5,604,097		Brenner	2/18/97
	*A45	5,599,921		Sorge, et al.	2/4/97
	*A46	5,599,674		Pena, S., et al.	2/4/97
	*A47	5,597,694		Munroe, et al.	1/28/97
	*A48	5,589,330		Shuber, A.	12/31/96
	*A49	5,582,989		Caskey, et al.	12/10/96
	*A50	5,578,458		Caskey, et al.	11/26/96
	*A51	5,578,443		Santamaria, P., et al.	11/26/96
	*A52	5,576,180		Melanon, et al.	11/19/96
	*A53	5,565,322		Heller, M.	10/15/96
	*A54	5,518,900		Nikiforov, et al.	5/21/96
	*A55	5,510,084		Cros, P., et al.	4/23/96
	*A56	5,487,985		McClelland, M., et al.	1/30/96
	*A57	5,468,613		Erlich, et al.	11/21/95
	*A58	5,445,934		Fodor, S., et al.	8/29/95
	*A59	5,220,004		Saiki, et al.	6/15/93
	*A60	5,126,239		Livak, K., et al.	6/30/92
	*A61	5,106,727		Hartely, J., et al.	4/21/92
	*A62	5,104,792		Silver, J., et al.	4/14/92
	*A63	5,043,272		Hartley, J.	8/27/91
	*A64	5,034,428		Hoffman, A., et al.	7/23/91
	*A65	5,032,502		Stodolsky	7/16/91
	*A66	4,963,663		White, R., et al.	10/16/90
	*A67	4,946,980		Halm, R., et al.	8/7/90
	*A68	4,829,098		Hoffman, et al.	5/9/89
	*A69	4,588,682		Groet, S., et al.	5/13/86
	*A70	5,545,527		Stevens et al.	08/13/96
	*A71	5,612,179		Simons	03/18/97
	*A72	5,707,806		Shuber	01/13/98
	*A73	5,728,530		Rust et al.	03/17/98
	*A74	5,834,181		Shuber	11/10/98
	*A75	5,849,483		Shuber	12/15/98

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Examiner's Initials	Cite No.	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication or of issue of Cited Document MM-DD-YYYY
		Number	Kind Code		
	*A76	5,981,176		Wallace	11/09/99
	*A77	5,994,056		Stevens et al.	11/30/99
	*A78	6,013,431		Higuchi	08/13/96
	*A79	6,015,675		Söderlund et al.	03/18/97
	*A80	5,545,527		Caskey et al.	01/11/00
	*A81	6,027,889		Barany et al.	01/18/00
	*A82	6,037,124		Matson	02/22/00
	*A83	6,048,689		Murphy et al.	03/14/00
	*A84	6,083,763		Balch	04/11/00
	*A85	6,100,030		McCasky Feazel et al.	07/04/00
	*A86	6,383,742	B1	Drmnanac et al.	05-2002
	*A87	5,910,576	A	Berina et al.	06-1999

FOREIGN PATENT DOCUMENTS

Examiner's Initials	Cite No.	Foreign Patent Document			Name of Patentee or Applicant of Cited Document (not necessary)	Date of Publication of Cited Document MM-DD-YYYY	Translation (Y/N)
		Office/Country	Number	Kind Code			
	*B1	EP	EP0534858A1		Keygene N.V.	3/31/93	
	*B2	WO	WO95/12607		Molecular Tool, Inc.	5/11/95	
	*B3	WO	WO96/17082		E.I. Du Pont De Nemours And Company	6/6/96	
	*B4	WO	WO96/17957		Hyseq, Inc.	6/13/96	
	*B5	WO	WO96/38591		Incyte Pharmaceuticals, Inc.	12/5/96	
	*B6	WO	WO97/12030		Nanogen, Inc.	4/3/97	
	*B7	WO	WO97/29212		Affymetrix, Inc.	8/14/97	
	*B8	WO	WO97/39151		Affymetrix, Inc.	10/23/97	
	*B9	WO	WO97/43450		Affymetrix, Inc.	11/20/97	
	*B10	WO	WO98/12354		Affymetrix, Inc.	3/26/98	
	*B11	WO	WO9818967		Affymetrix, Inc.	5/7/98	
	*B12	WO	WO98/24796		Affymetrix, Incorporated	6/11/98	
	*B13	WO	WO98/30883		Affymetrix, Inc.	7/16/98	
	*B14	WO	WO98/31836		Hyseq, Inc.	7/23/98	
	*B15	WO	WO98/20165		Whitehead Biomedical Inst.	11/05/97	
	*B16	WO	WO97/31327		Motorola, Inc.	12/11/96	
	*B17	WO	WO99/01576		University of Bristol	1/14/99	
	*B18	EP	EP0950720A1		Affymetrix, Inc.	10/20/99	
	*B19	WO	WO00/24939		Affymetrix, Inc.	5/04/00	
	*B20	EP	EP1001037A2		Whitehead Institute of Biomedical	5/17/00	

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OTHER ART — NON PATENT LITERATURE DOCUMENTS

Examiner's Initials	Cite No	Include name of the author (in CAPITAL LETTERS) title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, relevant page(s), volume-issue number(s), publisher, city and/or country where published.	Translation (Y/N)
	*C1	Center for Medical Genetics: Marshfield Medical Research Foundation, " Genotyping Statistics", (1998)	
	*C2	Cheung, et al., "Whole genome amplification using a degenerate oligonucleotide primer allows hundreds of genotypes to be performed on less than one nanogram of genomic DNA", Proc. Natl. Acad. Sci. USA, Vol. 93, pp. 14676-14679 (1996)	
	*C3	Delahunty, et al. "Testing the feasibility of DNA typing for human identification by PCR and an oligonucleotide ligation assay", Am. J. Hum. Genet., 58, pp. 1239-1246 (1996)	
	*C4	Elango, et al., "Generation and mapping of Mus spretus strain-specific markers for rapid genomic scanning" Mammalian Genome 7, pp. 340-343 (1996)	
	*C5	Gilles, et al., "Single nucleotide polymorphic discrimination by an electronic dot blot assay on semiconductor microchips" Nature Biotechnology Vol. 17, pp. 365-370 (1999)	
	*C6	Howell, et al., "Dynamic allele-specific hybridization: A new method for scoring single nucleotide polymorphisms", Nature Biotechnology, Vol. 17, pp. 87-88 (1999)	
	*C7	Ledbetter, et al., "Rapid isolation of DNA probes within specific chromosome regions by interspersed repetitive sequence polymerase chain reaction" Genomics 6, pp. 475-481 (1990)	
	*C8	Hunter, et al., "Toward the construction of integrated physical and genetic maps of the mouse genome using interspersed repetitive sequence PCR (IRS-PCR) genomics", Genome Research, 6, pp. 290-299 (1996)	
	*C9	McCarthy, et al., "Efficient high-resolution genetic mapping of mouse interspersed repetitive sequence PCR products, toward integrated genetic and physical mapping of the mouse genome", Proc. Natl. Acad. Sci. USA, Vol. 92, pp. 5302-5306 (1995)	
	*C10	Risch, et al., " The future of genetic studies of complex human diseases", Science, Vol. 273, pp. 1516-1517 (1996)	
	*C11	Sinnott, et al., "Alumorphs-Human DNA polymorphisms detected by polymerase chain reaction using alu-specific primers", Genomics 7, pp. 331-334 (1990)	
	*C12	Telenius, et al., "Degenerate oligonucleotide-primed PCR: General amplification of target DNA by a single degenerate primer", Genomics 13, pp. 718-725 (1992)	
	*C13	Vos, et al., " AFLP: a new technique for DNA fingerprinting", Nucleic Acids Research, Vol. 23, No. 21 pp. 4407-4414 (1995)	
	*C14	Wang, et al., "Large-scale identification, mapping, and genotyping of single-nucleotide polymorphisms in the human genome, Science, 280:1077-1082 (1998)	
	*C15	Welsh, et al., "Fingerprinting genomes using PCR with arbitrary primers", Nucleic Acids Research, Vol. 18, No. 24 pp. 7213-7218 (1990)	
	*C16	Zietkiewicz, et al., " Linkage mapping by simultaneous screening of multiple polymorphic loci using Alu oligonucleotide-directed PCR", Proc. Natl. Acad. Sci. USA Vol. 89, pp. 8448-8451 (1992)	
	*C17	Winzeler, et al., "Direct allelic variation scanning of the yeast genome", Science Vol. 281, pp. 1194-1197 (1998)	
	*C18	Broude, et al., "Differential Display of Genome Subsets Containing Specific Interspersed Repeats" PNAS, 94: 4548-4553, (April 1997).	
	*C19	Cheng et al., "Degenerate Oligonucleotide Primer-Polymerase Chain Reaction And Capillary Electrophoretic Analysis of Human DNA on Microchip-Based Devices", Anal. Biochem., 257:101-106 (March 1998)	

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Examiner's Initials	Cite No	Include name of the author (in CAPITAL LETTERS) title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, relevant page(s), volume-issue number(s), publisher, city and/or country where published.	Translation (Y/N)	
	*C20	Himmelbauer, et al., "Complex Probes for High-Throughput Parallel Genetic Mapping of Genomic Mouse Bac Clones", <i>Mammalian Genome</i> , 9:611-616 (August 1998)		
	*C21	Kruglyak, L., "The Use of A Genetic Map of Biallelic Markers In Linkage Studies" <i>Nature Genetics</i> , 17(1):22-24 (9/1/97)		
	*C22	Xiong M., et al., "Biallelic Markers In Genetics Studies of Human Diseases...", <i>American Journal of Human Genetics</i> , 61(4):1759		
	*C23	Wang, D. et al., "Large-Scale Identification, Mapping, and Genotyping...", <i>Science, US, Am. Assoc. For the Advancement of Science</i> , 280 (280):1077-1082 (May 1998)		
	*C24	Armstrong et al., "Suspension Arrays for High Throughput, Multiplexed Single Nucleotide Polymorphism Genotyping", <i>Cytometry</i> 40:102-108 (2000)		
	*C25	Cronin et al., "Applying rapid DNA microarray optimization capability to SNP screening and genotyping", <i>American Journal of Human Genetics</i> , 65(4):pA224, October 1999, No. 1238		
	*C26	Griffin et al., "Direct genetic analysis by matrix-assisted laser desorption/ionization mass spectrometry", <i>Proc. Natl. Acad. Sci. USA</i> , Vol. 96, pages 6301-6306, May 1999, Genetics		
	*C27	Holloway et al., "Comparison of Three Methods for Single Nucleotide Polymorphism Typing for DNA Bank Studies: Sequence-Specific Oligonucleotide Probe Hybridisation, TaqMan Liquid Phase Hybridisation, and Microplate Array Diagonal Gel Electrophoresis (MADGE)", <i>Human Mutation</i> , 14:340-347 (1999)		
	*C28	Iannone et al., "Multiplexed Single Nucleotide Polymorphism Genotyping by Oligonucleotide Ligation and Flow Cytometry", <i>Cytometry</i> , 39:131-140, (2000)		
	*C29	Ruano et al., "Haplotype of multiple polymorphism resolved by enzymatic amplification of single DNA molecules", <i>Proc. Natl. Acad. Sci. USA</i> , Vol. 87, pages 6296-6300, August 1990, Genetics		
	*C30	Sauer et al., "A novel procedure for efficient genotyping of single nucleotide polymorphisms", <i>Nucleic Acids Research</i> , 2000, Vol. 28, No. 5, E13-e13, Oxford University Press		
	*C31	Toh et al., "Large-scale discovery and genotyping of single-nucleotide polymorphisms in the mouse", <i>Nature Genetics</i> , Vol. 24, pages 381-386, April 2000		
	*C32	Himmelbauer et al., <i>Mammalian Genome</i> , Vol. 9, pages 611-616, 1998.		
	*C33	Telenius et al., <i>Genomics</i> , Vol. 13, pages 718-725, 1992.		

EXAMINER	DATE CONSIDERED
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#EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

*a copy of this reference is not provided as it was previously cited by or submitted to the office in a prior application, Serial No. 09/404,912, filed September 24, 1999, and relied upon for an earlier filing date under 35 U.S.C. 120 (continuation, continuation-in-part, and divisional applications).